# xSeries Education

## HEI30 – IBM Director 4.0 Support Training

# *Topic 1 – Introductions and Agenda*

# Topic Objectives



- Determine the course objectives
- Explain the course pre-requisites
- Establish the course agenda
- Identify the specific IBM xSeries products that will be discussed within this course.

# Course Objectives



Upon completion of this IBM Director 4.0 course, you will be able to:

- Describe the new features and capabilities
- State the minimum hardware and software requirements
- Explain the transition from 4.0 to 4.1
- Install server, console and agent code
- Deploy and manage the IBM BladeCenter
- State the support methodology
- Identify and use support reference tools and materials

# Pre-requisite Requirements



- HelpCenter Systems Management course
  and / or
- IBM Director 3.01.1 (HXI03) course
  and / or
- The equivalent IBM Director knowledge and experience

.

# Class Agenda



## Day1

- Lecture
  - Topic 1 – Introduction (this topic)
  - Topic 2 – IBM Director 4.0 New Features
  - Topic 3 – IBM Director 4.0 Installation Overview
  - Topic 4 – Support Methodology and Tools

- Lab
  - Lab 1 – Install IBM Director 4.0 Server, Console and Agent
  - Lab 2 - Deploy BladeCenter using Director 4.0
  - Lab 3 – Manage BladeCenter using Driector 4.0

## Key Exit Skills



In this course you will gain core knowledge of IBM Director 4.0 and gain practical, hands-on experience managing an IBM BladeCenter through lab exercises.

# IBM xSeries Products Taught in This Course



- IBM Director 4.0
- BladeCenter Chassis
- HS 120 server blades

## Topic Summary



This topic has:

- Determined the course objectives
- Explained the course pre-requisites
- Established the course agenda
- Identified the specific IBM xSeries systems and software that will be discussed within this course.

# *Topic 2 – Introducing IBM Director 4.0*

# Topic Objectives



By the end of this topic, you will be able to:

- Identify the IBM Director 3.1.01 functionality still available via 4.0.
- Identify the new features and function of IBM Director 4.0.
- Identify IBM Director 3.1.01 functionality that has been removed in 4.0
- State the minimum hardware and software requirements

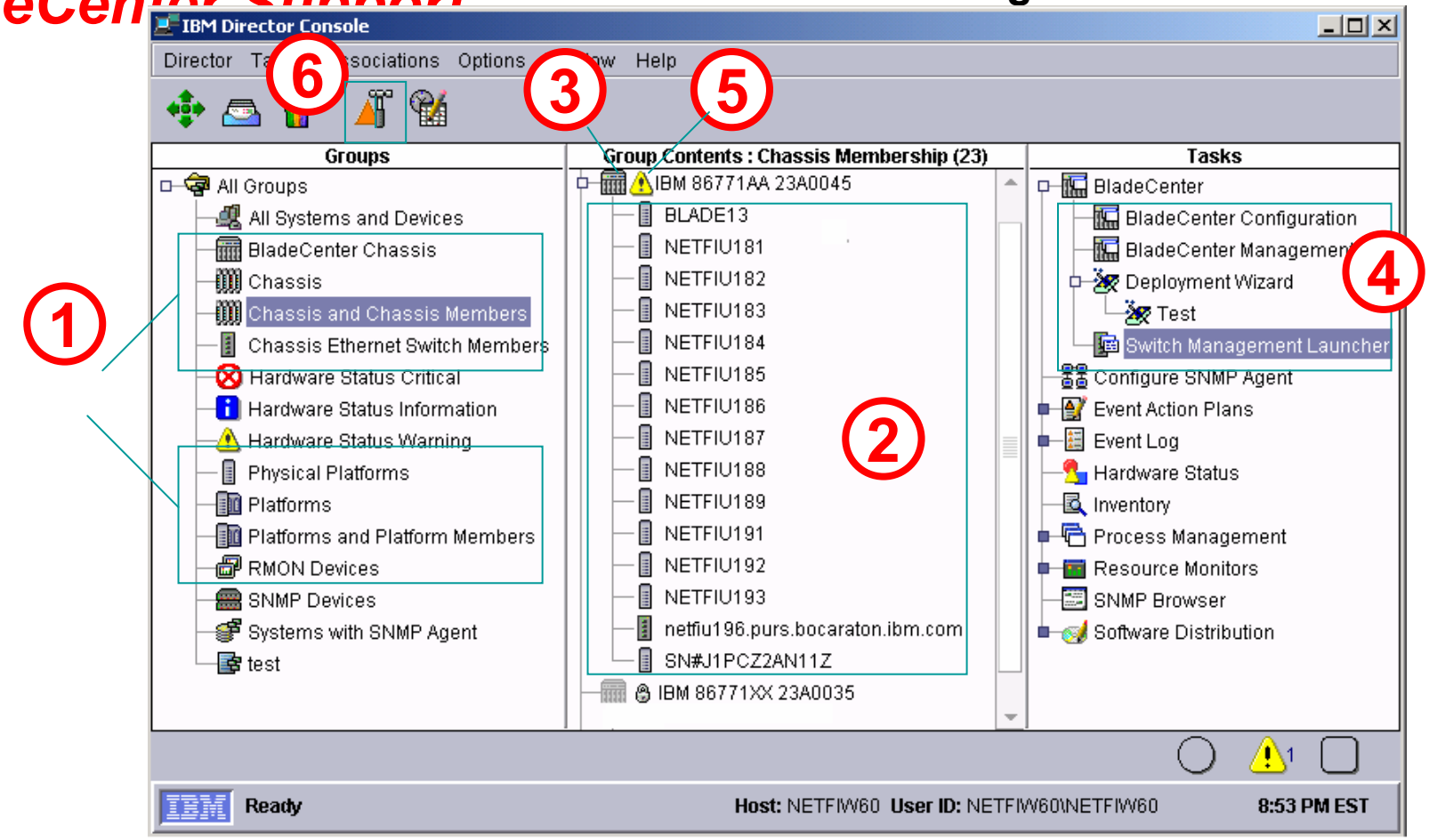
# Special Edition of IBM Director for BladeCenter only



- New, exclusive features specifically for BladeCenter customers
- Lowers costs associated with configuring and managing multiple blade servers
- CD ships with BladeCenter chassis only
- Management of systems with IBM Director 3.1 Agent NOT supported
- Fee-based Supportline contracts available for customers using IBM Director 4.0 for BladeCenter

# Director 4.0 Integrates BladeCenter Support






(1) New dynamic groups for chassis, processor blades, chassis and members
(2) New Associations to show blades, switch modules inside chassis
(3) New object types representing chassis, blades and switch modules
(4) New tasks for configuring chassis, management module, and DLINK switch
(5) Hardware status support
(6) New event types – create event action plans

# Existing IBM Director Functions Now Support BladeCenter



- Inventory
- Event Action Plan Viewer for Blade Events
- Managed Objects - Discovery and Association
- SNMP Browser support for Switch Modules
- Hardware Status
- Console Security/User Administration
- Dynamic Groups
- Resource Manager
- Process Manager
- Uninstall
- Database Support Consistent with 4.1

# Discovery Tips



- Same Subnet: Director Management Server and BladeCenter Chassis must be on the same subnet.
- DHCP server enabled on the network.
- By Default, the management module will attempt DHCP first. If this fails, then a static ip address is assigned (192.168.70.125).
- If no DHCP, then the user must configure one chassis at a time using the web based interface to the management module (http://192.168.70.125:80).

# New Features Introduced in 4.0



- Deployment Wizard
- BladeCenter Management and Configuration Task
- Switch Management Launcher
- Update Assistant
- Event Action Plan Wizard
- Blue Light Support

# Deployment Wizard



- Configure a BladeCenter chassis including
  - Setting up username and profiles
  - Enabling network protocols
  - Setting IP addresses for Management and Switch modules
- Create profiles that will automatically configure new BladeCenter chassis when added to IBM Director environment

# BladeCenter Management and Configuration Task



- Launches Management Processor Assistant (MPA) very similar to MPA web interface.
- Provides the following functionality
  - View environmental data
  - View component data
  - View service processor data
  - View event log
  - View hardware status summary
  - View power supply status
  - View Light Path Diagnostics

# BladeCenter Management and Configuration Task (continued)



- Provides the following functionality
  - Control blue light indicator
  - Power servers on and off
  - Restart servers
  - View event log
  - View hardware status summary
  - View power supply status
  - View Light Path Diagnostics
  - View and change keyboard, video and mouse (KVM) server switch status (ie. enable or disable)

# BladeCenter Management and Configuration Task (continued)



- Provides the following functionality
  - View and change KVM assignments
  - View and change USB Policy
  - View and change USB media assignment
  - View and change local power control
  - View and change blade server boot options
  - View and change switch IP settings
  - View and change switch management settings
  - View VPD
  - Configure alert forwarding profile

# BladeCenter Management and Configuration Task (continued)



- Provides the following functionality
  - Configure service processor network settings
  - Restart service processor

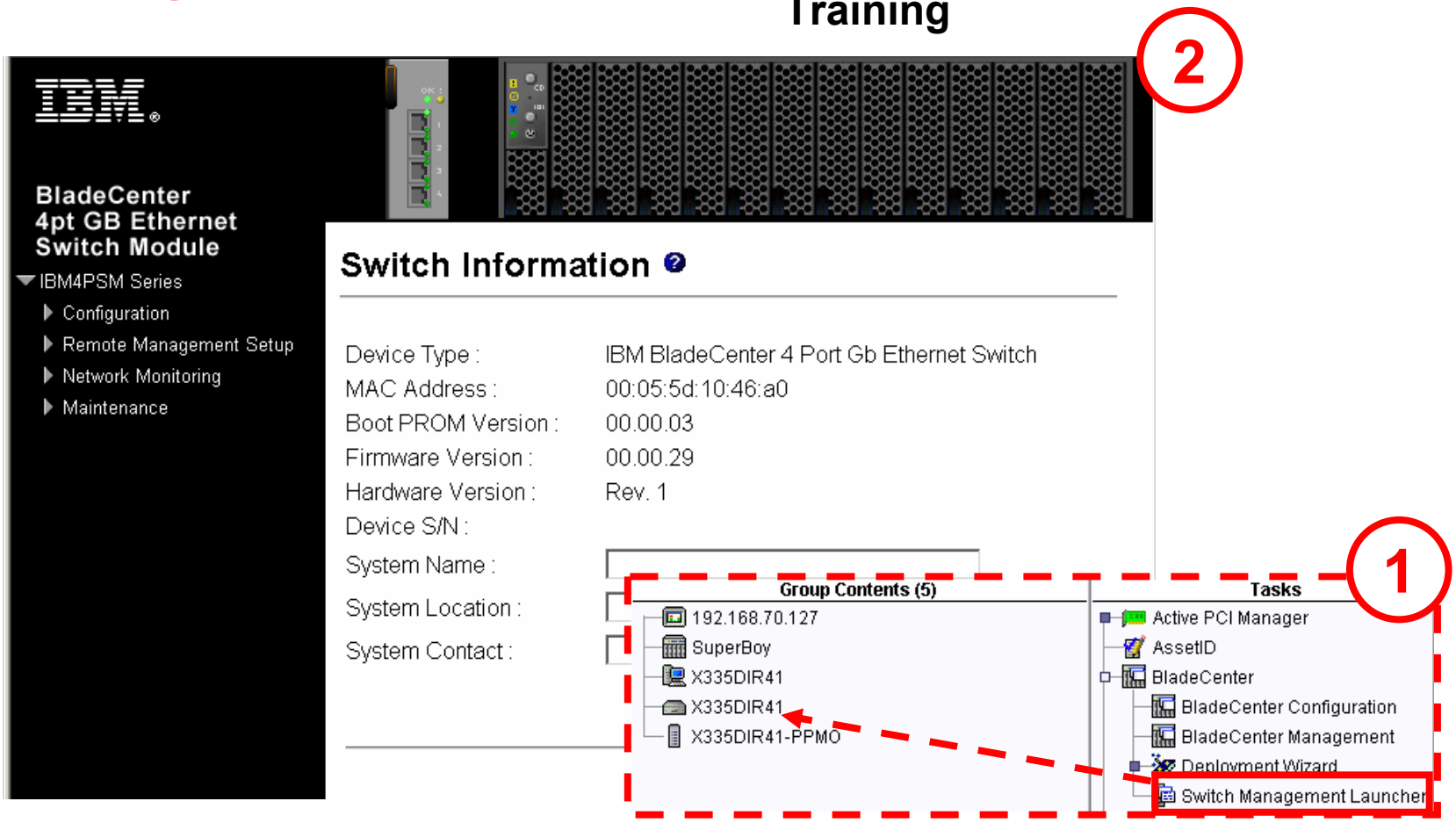
# Switch Management Launcher



- Launches switch manufacturer's switch management software

# Switch Management Launcher






Launch the native management task for the switch (currently a web browser for DLINK enet)

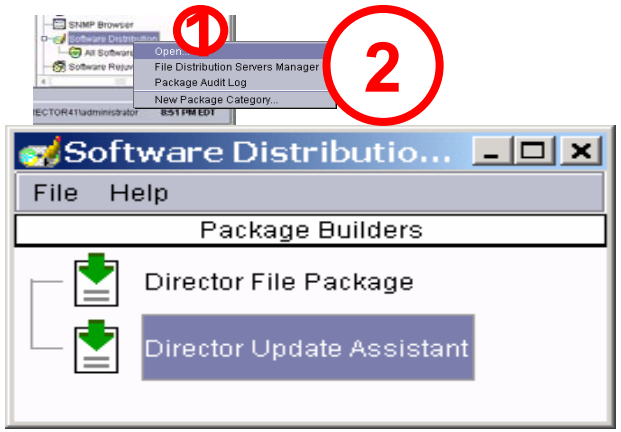
# Update Assistant

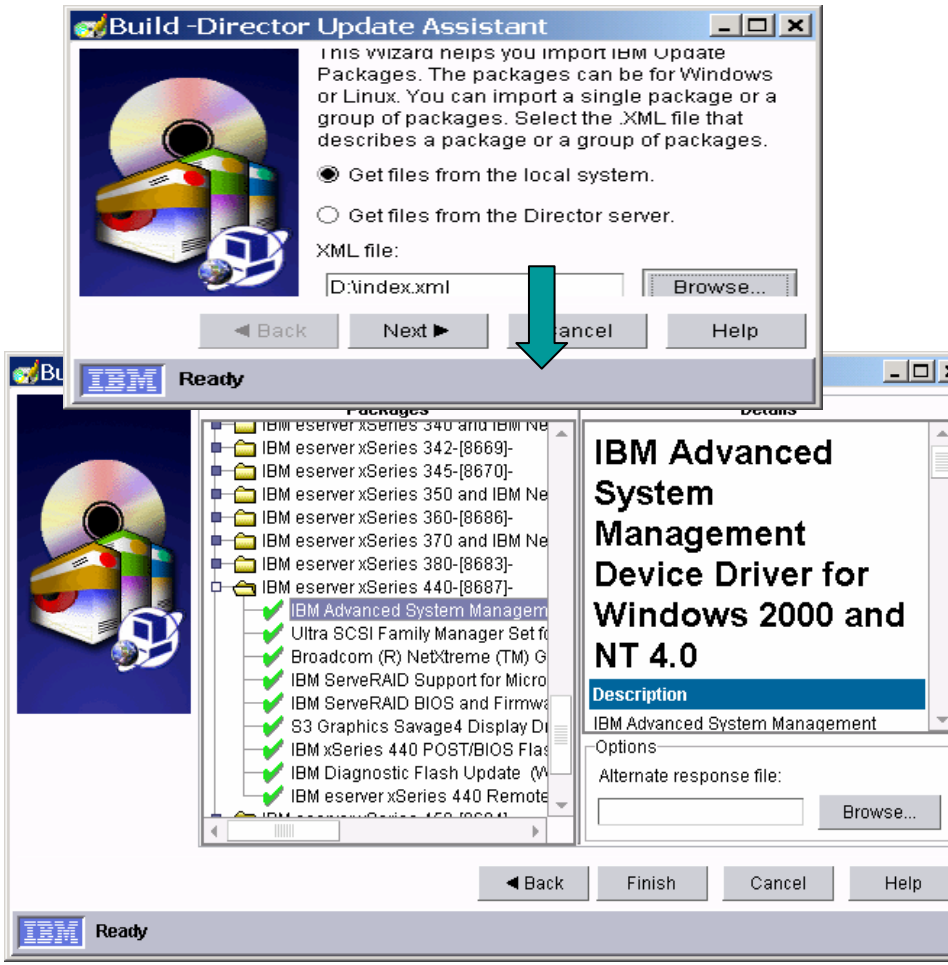


- Software distribution sub task
- imports the software into IBM Director and creates the software-distribution package(s)
  - Example UpdateXpress drivers

# Director Update Assistant



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Build -Director Update Assistant
This wizard helps you import IBM Update Packages. The packages can be for Windows or Linux. You can import a single package or a group of packages. Select the .XML file that describes a package or a group of packages.
Get files from the local system.
Get files from the Director server.
XML file:
D:\index.xml
Browse...
Back
Next
Help
Ready
IBM Advanced System Management Device Driver for Windows 2000 and NT 4.0
Description
IBM Advanced System Management
Options
Alternate response file:
Browse...
Back
Finish
Cancel
Help
Ready

- Part of base product
- Full Featured Software Distribution is not required
- Double click on Director console's Software Distribution task
- Select Director Update Assistant
- Brings up wizard that begins by prompting for location of update packages (UpdateXpress CD)
- In 4.0, no support to launch a category as a task

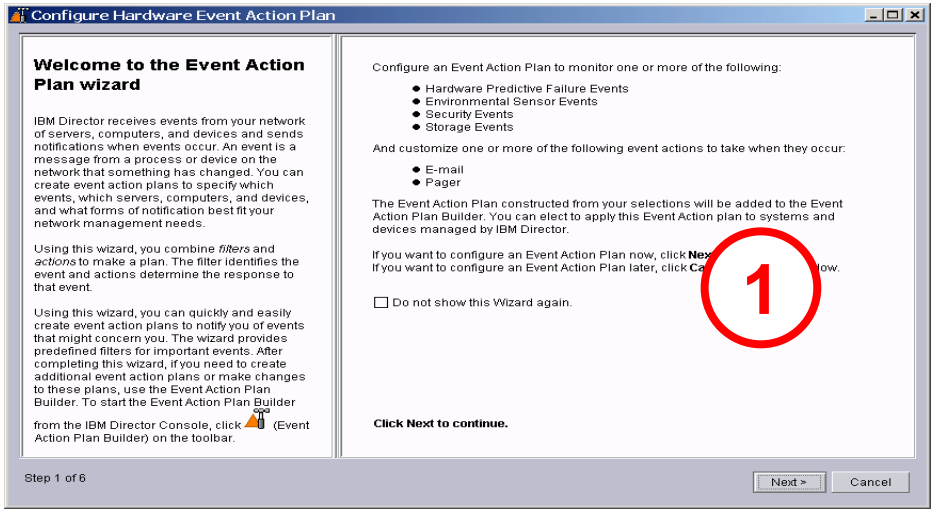
# Event Action Plan Wizard

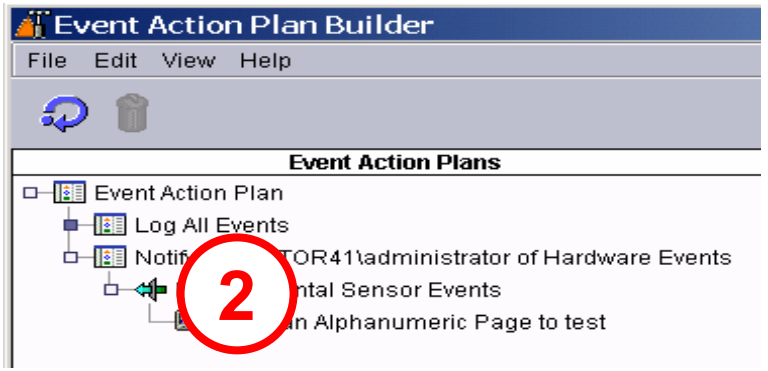


- Wizard that automates the creation of the standard event action plans you wish to create

# Event Action Plan (EAP)& Setup Wizard

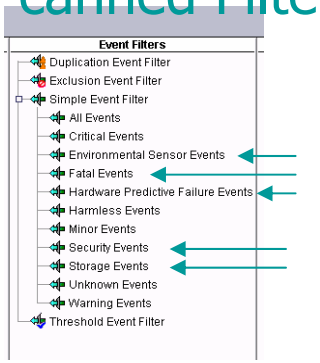



Configure Hardware Event Action Plan
Welcome to the Event Action Plan wizard
IBM Director receives events from your network of servers, computers, and devices and sends notifications when events occur. An event is a message from a process or device on the network that something has changed. You can create event action plans to specify which events, which servers, computers, and devices, and what forms of notification best fit your network management needs.
Using this wizard, you combine filters and actions to make a plan. The filter identifies the event and actions determine the response to that event.
Using this wizard, you can quickly and easily create event action plans to notify you of events that might concern you. The wizard provides predefined filters for important events. After completing this wizard, if you need to create additional event action plans or make changes to these plans, use the Event Action Plan Builder. To start the Event Action Plan Builder from the IBM Director Console, click (Event Action Plan Builder) on the toolbar.
Configure an Event Action Plan to monitor one or more of the following:
Hardware Predictive Failure Events
Environmental Sensor Events
Security Events
Storage Events
And customize one or more of the following event actions to take when they occur:
E-mail
Pager
The Event Action Plan constructed from your selections will be added to the Event Action Plan Builder. You can elect to apply this Event Action plan to systems and devices managed by IBM Director.
If you want to configure an Event Action Plan now, click Next.
If you want to configure an Event Action Plan later, click Cancel.
Do not show this Wizard again.
Click Next to continue.
Step 1 of 6
Next >
Cancel
1




- Automatically runs at first login to the director console, unless the EAP Wizard has been disabled via the console security task (EAP Builder task restricted).
- EAPs based on the following event categories:Hardware Predictive Failure Events, Environmental Sensors, Security, Storage (for version 4.0, these hardware events are apply to the BladeCenter chassis and processor blades).
- Actions for e-mail or page
- Discover and apply to "All Systems and Devices" group (If 3.1.x agents exist on the network, we recommend not using this feature).
- Once completed, any modifications to the event action plan will need to be made via the Event Action Plan Builder task.
- Pre-Canned Event Filters can be found in the Event Action Plan Builder task

## Pre-canned Filters



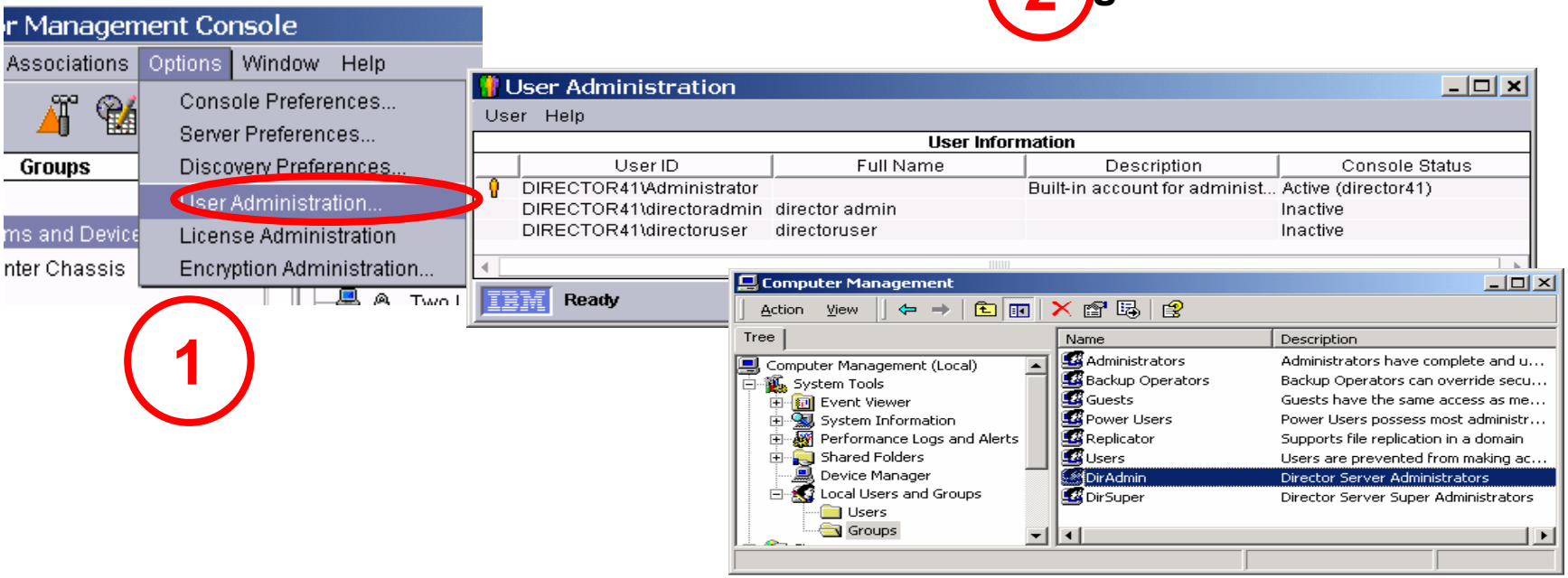
# Blue Light Support



- Provides ability to control blade server or chassis blue ID light
  - On
  - Off
  - Flashing

# Console Security





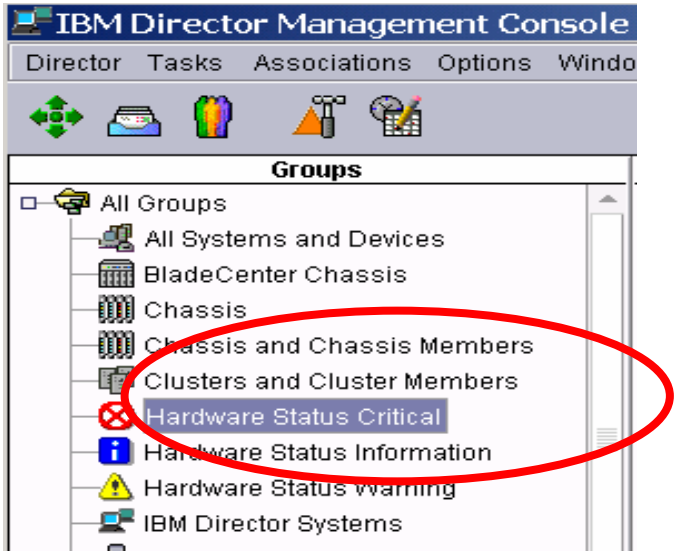

**Trusted Domain & User Administration**

- Create Local Groups (DirAdmin, DirSuper)
  no longer TWGAdmin and TWGSuperAdmin. No domain groups created. Must install as Local Administrator.
- Any user or domain group member
  that is in one of the local groups is authorized to use the Director server. This includes users
  from trusted domains.
- Use Operating System User Authorization

# Hardware Status Support



- One Stop Shop for hardware alerts in Hardware Status task (i.e. CIM alerts, OOB Management Module alerts)
- New Groups to monitor managed entities with Critical or Warning status



# What is being monitored?

## Chassis Managed Object

Environmental

- Power Supply 1
- Power Supply 2
- Power Supply 3
- Power Supply 4
- Temperature - Ambient
- Temperature - Management Processor
- Voltage –5v
- Voltage 1.8v
- Voltage 12v
- Voltage 2.5v
- Voltage 3.35v
- Voltage 5v

Other

- Management Processor – Configuration (event forwarding)

## Blade Managed Object

Environmental

- Temperature - CPU 1
- Temperature - CPU 2
- Temperature - CPU 3
- Temperature - CPU 4
- Temperature - CPU 5
- Temperature - CPU 6
- Temperature - CPU 7
- Temperature - CPU 8
- Temperature - DASD
- Temperature - DASD 1
- Temperature - DASD 2
- Temperature - DASD 3
- Temperature - DASD 4
- Temperature - DASD 5
- Voltage 12v
- Voltage 5v
- Voltage 3.35v
- Voltage 2.5v
- Voltage 1.5v
- Voltage 1.25v
- Memory Failure

# IBM Director 3.1.01 Removed Function



- Console Tasks
  - File Transfer
  - Remote Control
  - Remote Session
  - Network Configuration (CIM/UMS)
  - System Accounts (CIM/UMS)
  - Asset ID (CIM/UMS)
  - CIM Browser and DMI Browser tasks
  - Cluster Systems Management – no tasks or MSCS discovery
  - Management Processor Assistant (MPA/ASM) tasks
  - RAID Manager
  - Rack Manager, Capacity Manager, System Availability, Software Rejuvenation
  - ASF Support (3.1.1)

# IBM Director 3.1.01 Removed Function (continued)



- Agent's Web-based interface
- Tivoli Management Agent from Director install
- LANDesk support
- SNMP Support over IPX

# Supported Operating Systems



- Console
  - Windows 2000 Server (Service Pack 3 required)
  - Windows 2000 Advanced Server through SP3 (Service Pack 3 required)
  - Windows 2000 Professional (Service Pack 3 required)
  - Windows XP Professional (Service Pack 1 recommended)
- Server
  - Windows 2000 Server (Service Pack 3 required)
  - Windows 2000 Advanced Server through SP3 (Service Pack 3 required)
- Agent
  - Windows 2000 Server (Service Pack 3 required)
  - Windows 2000 Advanced Server through SP3 (Service Pack 3 required)
  - Red Hat Linux, version 7.3
  - SuSe Linux, version 8.0

# Database Support



- Microsoft Jet 4.0 database engine, Service Pack 6, and Microsoft Data Access Control (MDAC) 2.7
- Microsoft SQL Server 7.0, Service Pack 3, and MDAC 2.7
- Microsoft SQL Server 2000, Service Pack 2, and MDAC 2.7
- Microsoft SQL Server 2000 Desktop Engine, Service Pack 2, and MDAC 2.7
- Microsoft Data Engine 1.0, Service Pack 3, and MDAC 2.7
- Oracle Server version 8.1.7 or 9.0.x
- IBM DB2 Universal Database 7.2, Fix Pack 6

# Minimum Hardware Requirements

- Must meet Wired for Management (WfM) 2.0 specifications
- SMBIOS 2.1 or later is required for all systems in an IBM Director environment.

| | Director Server | Director Console | Director Agent |
|---|---|---|---|
| Microprocessor Speed | Pentium 300Mhz or > | Pentium | Pentium 300Mhz or > |
| Memory (RAM) | 256 MB(512 MB recommended) | 128 MB | 128 MB |
| Disk Space | 300 MB | 100 MB | 160 MB |

# Topic Summary



This topic has:

- Identified the IBM Director 3.1.01 functionality still available via 4.0.
- Identified the new features and function of IBM Director 4.0.
- Identified IBM Director 3.1.01 functionality that has been removed in 4.0
- Stated the minimum hardware and software requirements

# *Topic 3 – The Transition to IBM Director 4.1*

# Topic Objectives



By the end of this topic, you will be able to:

- Explain the entitlement rules for obtaining free copies of IBM Director 4.1 when it is released.
- Explain what can be preserved when transitioning from IBM Director 4.0 to 4.1
- State the steps required to preserve some of the IBM Director 4.0 data when transitioning to 4.1

# Entitlement



- BladeCenter Customers entitled to Free Copy of IBM Director 4.1 when available
  - Profile on support site to receive proactive e-mail notification of availability
  - Choice of Web Download or CD
  - Geos will be seeded with CDs
- IBM Director 3.1 Users entitled to free upgrade, including new optional Server Plus Pack
  - Upgrade Install feature
  - Geos nominate customers to receive free Server Plus Pack CD

# Migrating to 4.1



- It is possible to preserve some customization while moving from Director 4.0 to 4.1
  - Can preserve:
    - Event Action Plans
    - Monitor Threshold plans
    - Dynamic group definitions
- Procedure:
  - Export Director 4.0 data
  - Save the export files
  - Uninstall Director 4.0
  - Install Director 4.1
  - Import the data from the saved files

## Topic Summary



This topic has:

- Explained the entitlement rules for obtaining free copies of IBM Director 4.1 when it is released.
- Explained what can be preserved when transitioning from IBM Director 4.0 to 4.1
- Stated the steps required to preserve some of the IBM Director 4.0 data when transitioning to 4.1

# *Topic 4 – Support Methodology and Information Resources*

# Topic Objectives



By the end of this topic, you will be able to:

- Explain IBM Director 4.1 support options fee vs free
- List some of the publications which can help a customer make the most of IBM Director

# Support Methodology



- Free support
  - On-line or e-mail
    - http://www.ibm.com/pc/support or
    - http://www.pc.ibm.com/qtechinfo/MIGR-4GCRWU.html
  - Discussion forum
    - http://www7.pc.ibm.com/~ums/
- Fee Support
  - Voice & electronic by purchasing a SupportLine contract
    - US, call 888-426-4343 or visit: http://www-1.ibm.com/services/its/us/mus62d1.html
    - ROW, visit www.ibm.com/planetwide to obtain the SupportLine telephone number for their country.

# Information Resources



- Publications
  - *IBM Director* CD in the /docs directory:
    - *IBM Director 4.0 for BladeCenter products Installation and Configuration Guide* (dir40_install.pdf)
    - *IBM Director 4.0 for BladeCenter products Systems Management Guide* (dir40_sysmgt.pdf)
  - download these books from www.ibm.com/redbooks
    - *Implementing IBM Director Management Solutions* (SG 24-6188-00)
    - *Integrating IBM Director with Enterprise Management Solutions* (SG24-5388-01)
    - *IBM Director Security* (REDPO417)

# Information Resources



- Publications (continued)
  - download these books from www.ibm.com/redbooks
    - *IBM* eserver *BladeCenter Type 8677 Planning and Installation Guide* (GA27-4327-00)
    - *IBM* eserver *BladeCenter Systems Management* (REDP3582)
    - *Deploying Microsoft Exchange on IBM* eserver *BladeCenter* (REDP3585)
    - *Deploying Lotus Domino on IBM* eserver *BladeCenter* (REDP3584)
    - *Managing IBM TotalStorage NAS with IBM Director* (SG24-6830-00)

# Information Resources



- Internal Website
  - Trace, Debug and Developer Help
    - http://wormald.raleigh.ibm.com

## Topic Summary



This topic has:

- Explained IBM Director 4.1 support options fee vs free
- Listed some of the publications which can help a customer make the most of IBM Director

# Course Summary



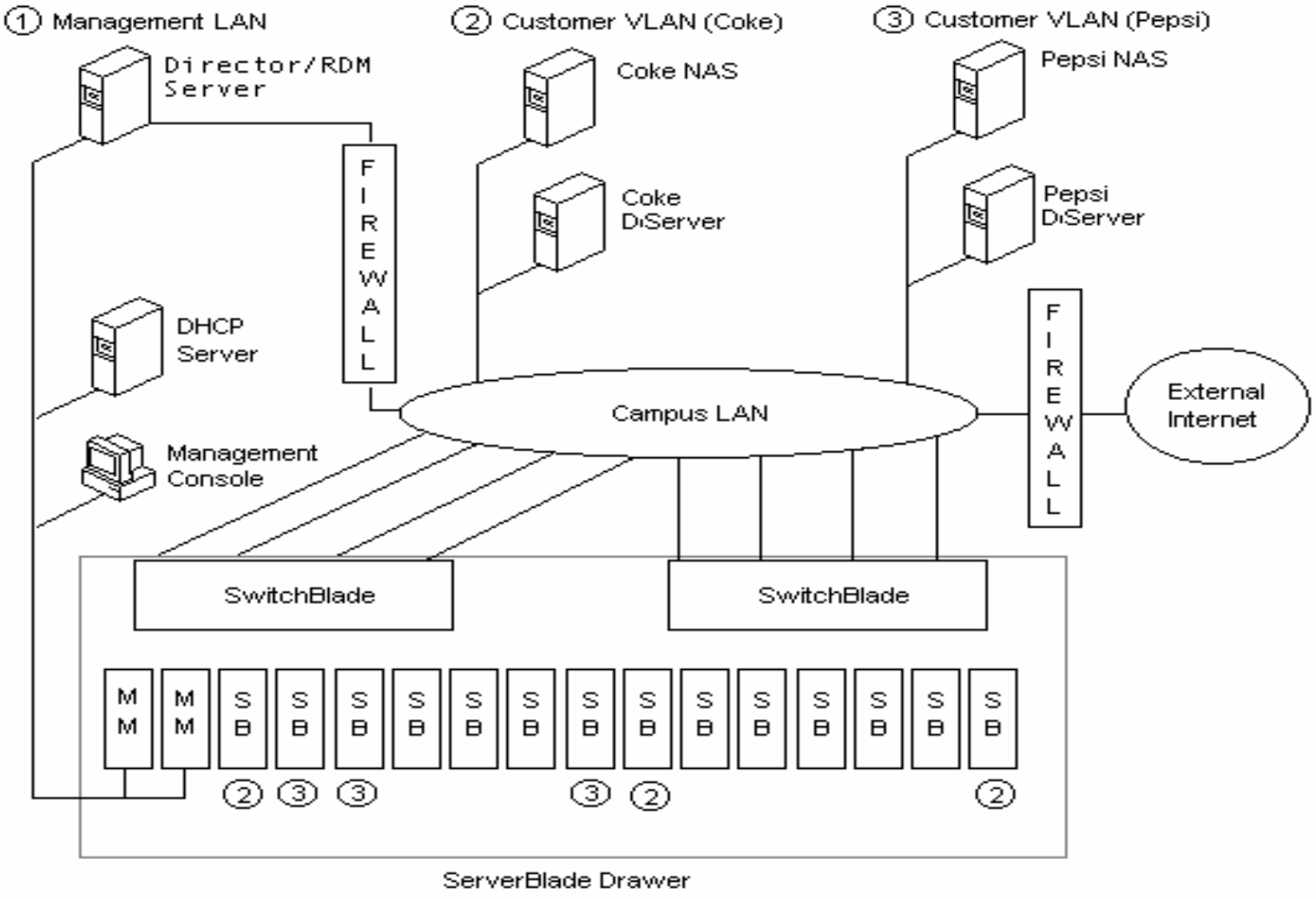
This course has:

- Described the new features and capabilities
- Stated the minimum hardware and software requirements
- Explained the transition from 4.0 to 4.1
- Provided hands on experience installing Director 4.0 server, console and agent code
- Provided hands on experience deploying and managing the IBM BladeCenter with Director 4.0
- Stated the support methodology
- Identified and use support reference tools and materials

# Backup Slides

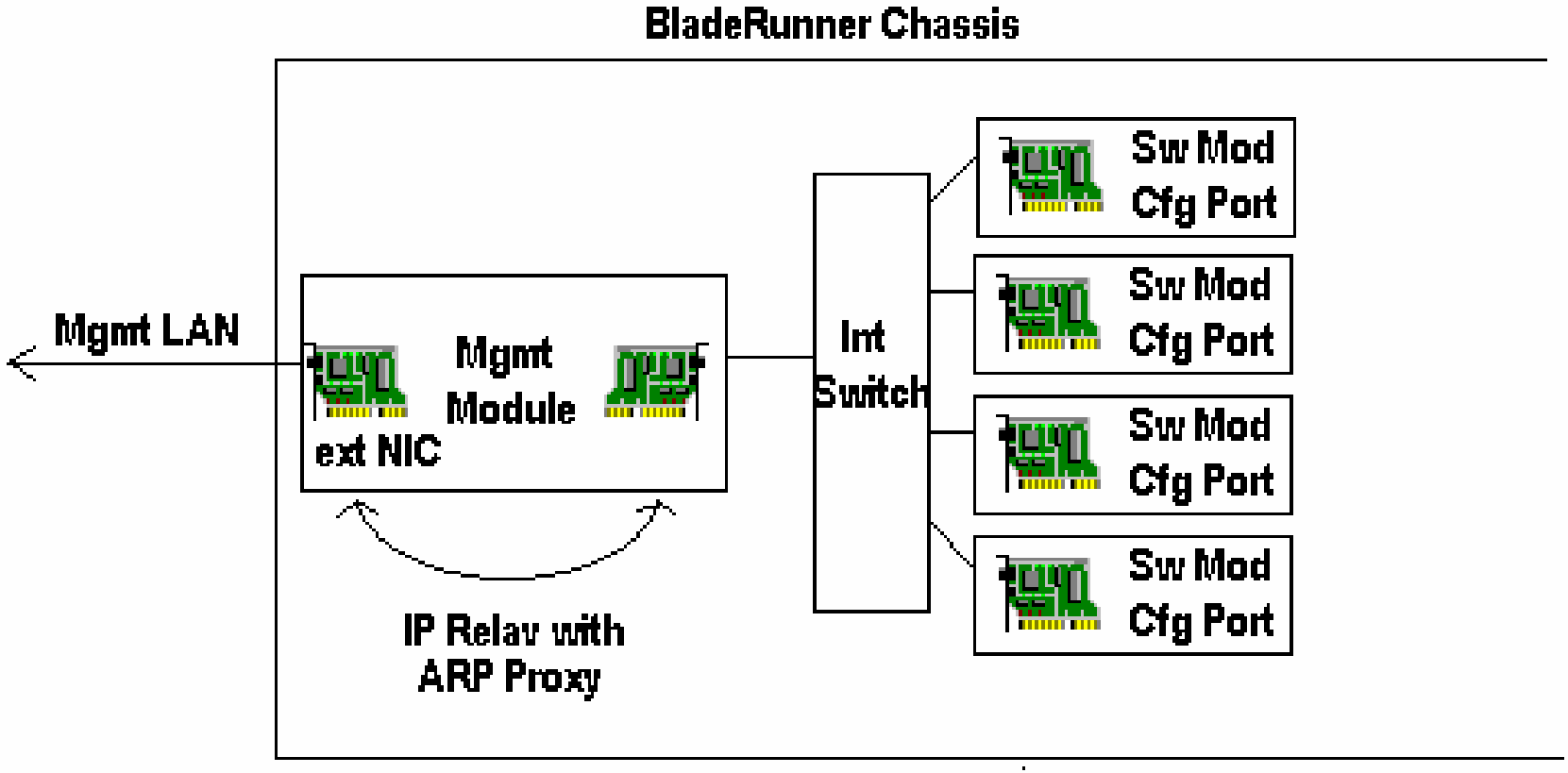
# Possible Network Design





# Relay IP Traffic to Switch Modules






All of these IP addresses must be on the same subnet in order for IP routing to function properly. That is, the Management Module does not act as an IP router; it only serves as an ARP Proxy and relays all IP traffic between the external management port and the switch modules.

- Provides ability to control blade server or chassis blue ID light
  - On
  - Off
  - Flashing

# ISMP System Tips



- Concern: I2C Device conflicts with Director Agent SMBus controller
  - I2c installed by ServerGuide or ASM diskette when Automatic Server Restart is installed
- Manual fix
  - Uninstall I2C device (via Device Manager)
  - Delete via regedit, HKLM\System\CCS\Svcs\I2C
  - Delete C:\Winnt\System32*H8*.dll
  - Reboot
- Solution for Director 3.1 on x242 and X342
  - Apply IC32829 then SP1 for Version 3.1